

CLAIMS

1. Electrolytic reactor, comprising a conical chamber (13) open at two opposite ends, a support (30) for a part to be coated and an anode (20) placed in the chamber, towards the wide and the narrow end  
5 respectively, and a means of circulating the electrolyte through the chamber from the narrow end to the wide end, characterised in that the chamber consists of stacked and removable slices (7) and an armature (22, 23) for supporting and clamping the  
10 slices.

2. Electrolytic reactor according to claim 1, characterised in that at least one of the slices contains at least a cavity (26, 28, 29) in which the anode support portions can be placed.

15 3. Electrolytic reactor according to either claim 1 or 2, characterised in that the taper angle of the conical chamber is less than 20° and uniform.

4. Electrolytic reactor according to claim 3, characterised in that the electrolyte circulation is  
20 coaxial with the conical chamber within a tank (1)

containing the said chamber, and in that it comprises an electrolyte circuit looping back into the tank.

5        5. Electrolytic reactor according to claim 4, characterised in that the electrolyte circuit is connected to the narrow end of the chamber through a nozzle (11) with a conical opening prolonging the chamber.

6. Electrolytic reactor according to any one of claims 1 to 5, characterised in that the support (30)  
10 of the part to be coated comprises electrical contacts (38) for cathode polarisation of the part arranged around the support and that include a free end (40) pressed in contact on the part (31), and a connection end (44) extending on a support face opposite the part.

15        7. Electrolytic reactor according to claim 6, characterised in that the connection ends of the electrical contacts are connected to flexible arms (37) of a star connector (36), fixed to the support (30) by a mechanism (41) with variable spacing, and in that the  
20 support includes stops (35) on which the arms bend, and the electrical contacts are in the form of curved hooks standing up on the arms.

8. Electrolytic reactor according to any one of the above claims, characterised in that the support  
25 (30) of the part (31) comprises a housing with a periphery and depth adjusted to the part (31).

9. Electrolytic reactor according to any one of the above claims, characterised in that the part support is installed removably on an armature (64)  
30 delimiting the conical chamber.

10. Electrolytic reactor according to any one of the above claims, characterised in that the conical chamber, the support of the part to be coated, the part itself and the anode are coaxial.

5        11. Electrolytic reactor according to claim 5, characterised in that the nozzle (11) also consists of stacked and removable slices.

12. Electrolytic reactor according to any one of the above claims, characterised in that the slices (70)  
10 are provided with individual extraction means (74).

13. Electrolytic reactor according to claim 12, characterised in that it comprises slides (78) free to move in the grooves (85, 86) of sidewalls (84) of the tank (1) and recessed (81) above a slice (70) to be  
15 extracted.

14. Electrolytic reactor according to claim 2, characterised in that the said slice (70) comprises at least three radiating anode support arm cavities (71).